UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 May 2009</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1 – 5, 9, 10, 12 – 14, 16 – 22, and 27</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1 – 5, 9, 10, 12 – 14, 16 – 22, and 27</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1   **DETAILED ACTION**

2

3   Claims 1 – 5, 9, 10, 12 – 14, 16 – 22, and 27 are pending.

4   This action is in response to the communication filed on 5/5/09.

5   All objections and rejections not set forth below have been withdrawn.

6

7   ***Continued Examination Under 37 CFR 1.114***

8

9   A request for continued examination under 37 CFR 1.114, including the fee set

10   forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

11   application is eligible for continued examination under 37 CFR 1.114, and the fee set

12   forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

13   has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/5/09

14   has been entered.

15

16   ***Claim Objections***

17

18   Claims 2, 3, 5, 9, 10, 12 – 14, 16 – 21 are objected to under 37 CFR 1.75(c), as

19   being of improper dependent form for failing to further limit the subject matter of a

20   previous claim. Specifically, they comprise recitations pertaining to a process/method of

21   using the recited apparatus or subject matter operated upon within the method of using

22   the recited apparatus, however, they do not further comprise recitations of structure for

1   limiting the recited apparatus. As such, the recitations are merely descriptive and non-

2   limiting. Applicant is required to cancel the claim(s), or amend the claim(s) to place the

3   claim(s) in proper dependent form, or rewrite the claim(s) in independent form. .

4

5   *Claim Rejections - 35 USC § 112*

6

7   The following is a quotation of the second paragraph of 35 U.S.C. 112:

8   The specification shall conclude with one or more claims particularly pointing out and distinctly
9   claiming the subject matter which the applicant regards as his invention.
10
11   **Claims 9, 10, 12, 13, and 21 are rejected under 35 U.S.C. 112, second**

12 **paragraph, as being indefinite for failing to particularly point out and distinctly**

13 **claim the subject matter which applicant regards as the invention.**

14

15   Regarding claim 9, it is rejected as the scope of claim 9 is indeterminate.

16 Specifically, claim 1 recites as "encoding scale factor data" as optional, whereas claim 9

17 contradicts claim 1 and appears to further recite the "encoding scale factor data" as

18 non-optional. For the purpose of examination, the examiner presumes the recitations of

19 claim 9 to be optional and non-limiting in harmony with claim 1.

20

21   Claim 21 recites the limitation *"and wherein said signal distribution means further*

22 *comprises means for distributing the plurality of signals "* in line 7. There is insufficient

23 antecedent basis for this limitation in the claim. For the purpose of examination, the

1   examiner presumes the applicant to recite *"and means for distributing the plurality of*

2   *signals"*.

3

4   Claims 10, 12, and 13 are rejected by virtue of dependency.

5

6   ***Claim Rejections - 35 USC § 102***

7

8   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

9   form the basis for the rejections under this section made in this Office action:

10   A person shall be entitled to a patent unless –

11   (b) the invention was patented or described in a printed publication in this or a foreign country or in public
12   use or on sale in this country, more than one year prior to the date of application for patent in the United
13   States.
14
15   **Claims 1 – 9, 11, 16 – 22, and 27 are rejected under 35 U.S.C. 102(b) as**

16   **being anticipated by Gunji et al. (Gunji), "Digital Audio System", U.S. Patent**

17   **Publication, 2002/0002412 A1.**

18

19   Regarding claim 1, Gunji discloses:

20   *means for receiving a signal* (fig. 4:15; fig. 13:15);

21   *a pre-encoder, implemented in hardware, for pre-encoding the signal to generate*

22   *a pre-encoded signal* (fig. 9:10; fig. 4:22; fig. 13:22; par. 45; 46); and

23   *a watermark processing means comprising* (fig. 9):

24   *a decoder, implemented in hardware, for decoding the pre-encoded signal to*

25   *generate a decoded signal* (fig. 9:11);

1   *a watermark embedder, imbedded in hardware, for inserting a watermark in the*

2   *decoded signal to generate a watermarked signal* (fig. 9:18); and

3   *a re-encoder, implemented in hardware, for re-encoding the watermarked signal*

4   *to generate a watermarked encoded signal* (fig. 9:22),

5   Regarding the applicant's recitation of intended use for the claimed system, the

6   examiner notes that while features of an apparatus may be recited either structurally or

7   functionally, claims directed to an apparatus must be distinguished from the prior art in

8   terms of structure rather than function. The applicant's recitation of how the encoding

9   system functions fails to further limit the apparatus as claimed. However, for the

10   applicant's benefit, the examiner notes that Gunji discloses:

11   *wherein the pre-encoder generates encoding assistance data* (fig. 3:f; par. 47 –

12   50, 53 – herein an encoder ["pre-encoder"], creates a signal comprising audio data and

13   encoding parameters, "assistance data"; furthermore noted, Gunji discloses that the

14   pre-encoder generates a signal which according to the applicant inherently comprises

15   the 'encoding assistance data' - see applicant's specification, pg. 13, line 18 – pg. 14,

16   line 8)*, for a different encoding rate than an encoding data rate of the pre-encoded*

17   *signal, said encoding assistance data including at least one of encoding quantization*

18   *control data and encoding scale factor data, and the re-encoder re-encodes the*

19   *watermarked signal in response to the encoding assistance data* (par. 45, 46, 74, 75 –

20   herein the signal comprising the coding parameters may be re-encoded by an encoder

21   ["re-encoder"] using the coding parameters received and detected within the signal,

22   furthermore the re-encoded signal is watermarked).

Regarding claims 2 – 5, 9, 10, 12 – 14, and 16 – 21, they largely comprise non limiting recitations pertaining to a process/method of using the recited apparatus or subject matter operated upon within the method of using the recited apparatus, rather than structural limitations pertaining to the recited apparatus. The examiner reminds the applicant that apparatus type claims are distinguished from the prior art through recitations of structural limitations. However, for the applicant's benefit the examiner points out that Gunji discloses the following:

Regarding claim 2, Gunji discloses:
wherein the pre-encoder includes the encoding assistance data in the pre-encoded signal (par. 51, 52).

Regarding claim 3, Gunji discloses:
wherein the pre-encoder includes the encoding assistance data in at least one ancillary data section of the pre-encoded signal (par. 50).

Regarding claim 4, Gunji discloses:
storage means for storing the pre-encoded signal (fig. 13:10).

Regarding claim 5, Gunji discloses:

1   *wherein the storage means additionally stores the encoding assistance data* (fig.

2   3:f; fig. 13:10 – herein it is noted that encoded data includes encoding assistance data

3   and the encoded data is stored in memory).

4

5   Regarding claim 9, Gunji discloses:

6   *wherein the encoding scale factor data comprises a scale factor offset associated*

7   *with a scale factor offset value between a first encoding rate and a second encoding*

8   *rate* (par. 49, 50).

9

10   Regarding claim 10, Gunji discloses:

11   *wherein the first encoding rate is an encoding rate of the pre-encoded data*

12 *signal, and the second encoding data rate is an encoding rate of the watermarked*

13 *encoded signal* (Gunji, par. 46 – 50)

14

15   Regarding claim 12, Gunji discloses:

16   *wherein the re-encoder generates the watermarked encoded signal at the*

17 *second encoding rate by determining re- encoding scale factors in response to the scale*

18 *factor offset and scale factor values associated with the first encoding rate* (Gunji, par.

19 *46 – 50).*

20

21   Regarding claim 13, Gunji discloses:

wherein the pre-encoder replaces scale-factors of the pre-encoded signal by a shifted version of the scale-factors of the second encoding rate (Gunji, par. 46 – 50).

Regarding claim 14, Gunji discloses:

wherein the encoding assistance data comprises encoding rate independent encoding parameters that are independent of the encoding rate (Gunji, par. 46 – 50).

Regarding claim 16, Gunji discloses:

wherein the encoding assistance data comprises perceptual model data (par. 7, 54) .

Regarding claim 17, Gunji discloses:

wherein the re-encoder operates frame aligned with the pre-encoder (par. 51, 52, 57, 58).

Regarding claims 18 - 20, Gunji discloses:

wherein the received signal is an audio signal; wherein the pre-encoded signal is pre-encoded in accordance with an MPEG audio compression standard; wherein the received signal is a video signal (par. 71, 72).

Regarding claim 21, Gunji discloses:

1   *wherein the pre-encoder pre-encodes a multiplicity of signals; the storage means*

2   *stores the multiplicity of signals and the watermark processing means individually*

3   *embeds a watermark in a plurality of signals, and wherein said signal distribution means*

4   *further comprises means for distributing the plurality of signals* (Abstract, par. 7 – 9,

5   herein Gunji discloses that the invention is operable respecting more than one signal).

6

7

8   ***Claim Rejections - 35 USC § 103***

9

10   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

11   obviousness rejections set forth in this Office action:

12   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
13   forth in section 102 of this title, if the differences between the subject matter sought to be patented and
14   the prior art are such that the subject matter as a whole would have been obvious at the time the
15   invention was made to a person having ordinary skill in the art to which said subject matter pertains.
16   Patentability shall not be negatived by the manner in which the invention was made.
17
18   **Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable**

19   **over Gunji in view of Katayama et al. (Katayama), "Coding Device, Coding**

20   **Method, Program and Recording Medium", U.S. Patent Publication 2002/0034376**

21   **A1.**

22

23   Regarding claim 22, it is rejected, at least for the same reasons as claim 1, and

24   furthermore because Gunji discloses:

25   *receiving a signal* (fig. 4:15; fig. 13:15);

1   *pre-encoding, using a hardware pre-encoder, the signal to generate a pre-*

2   *encoded signal* (fig. 9:10; fig. 4:22; fig. 13:22; par. 45; 46); and

3   *generating encoding assistance data in association with the pre-encoding*

4   (Katayama, par. 10 - 12)*;*

5   *a watermark processing means comprising* (fig. 9):

6   *decoding, using a hardware decoder, the pre-encoded signal to generate a*

7   *decoded signal* (fig. 9:11);

8   *inserting, using a hardware watermark embedder, a watermark in the decoded*

9   *signal to generate a watermarked signal* (fig. 9:18); and

10   *re-encoding, using a hardware watermark re-encoder, the watermarked signal to*

11   *generate a watermarked encoded signal in response to the encoding assistance data*

12   (fig. 9:22), *wherein the generated encoding assistance data is for a different encoding*

13   *data rate than an encoding data rate of the pre-encoded signal, wherein the encoding*

14   *assistance data includes at least one of encoding quantization control data and*

15   *encoding scale factor data, and wherein the re-encoding step comprises re-encoding*

16   *the watermarked signal at the different encoding rate* (Gunji, par. 45, 46, 74, 75).

17   Gunji discloses a means to encode a signal at a first encoding rate, means for

18   generating encoding assistance data, and means for utilizing the encoding assistance

19   data to re-encode the signal (Gunji, fig. 4:15; fig. 13:15, par. 50). Gunji, however, does

20   not appear to explicitly recite re-encoding a signal at a second encoding rate.

1   Katayama discloses that an encoder may utilize encoding assistance, e.g. "scale

2   factor offset data", to re-encode a signal at a second encoding rate (Katayama, par. 10 -

3   12).

4   It would have been obvious to one of ordinary skill in the art to employ the

5   methods of Katayama within Gunji. This would have been obvious because one of

6   ordinary skill in the art would have been motivated by the flexibility and the advantage of

7   efficiently encoding signals on a systems with different bandwidth characteristics

8   (Katayama, par. 4 – 6).

9

10   Regarding claim 27, it comprises essentially similar recitations as claim 22, and it

11   is rejected, at least, for the same reasons.

12

13   ***Response to Arguments***

14

15   Applicant's arguments filed 5/5/09 have been fully considered but they are not

16   persuasive.

17

18   Applicant argues or asserts essentially that:

19

20   (i)   *Claim 1 (as well as claims 22 and 27) includes the limitation "wherein the pre-*

21   *encoder generates encoding assistance data for a different encoding data rate than an*

22   *encoding data rate of the pre-encoded signal, said encoding assistance data including*

1   *at least one of encoding quantization control data and encoding scale factor data".*

2   *Applicants submit that there is no disclosure or suggestion in Gunji et al. that the re-*

3   *encoder encodes the watermarked signal at a different encoding rate than that of the*

4   *pre-encoded signal, and that the pre-encoder generates the encoding assistance data*

5   *for this different encoding rate. This is described in the specification on page i0, line 32*

6   *to page ii, line 9.* (Remarks, pg. 12, 13)

7

8   In response to applicant's argument that Gunji does not disclose the applicant's

9   recitation of intended use for the claimed system (i.e. applicant essentially argues the

10   functional features of the recited apparatus), the examiner notes that a recitation of the

11   intended use of the claimed invention must result in a structural difference between the

12   claimed invention and the prior art in order to patentably distinguish the claimed

13   invention from the prior art. If the prior art structure is capable of performing the

14   intended use, then it meets the claim.

15

16   (ii)   *Claim 9 includes the limitation "wherein the encoding scale factor data comprises*

17   *a scale factor offset associated with a scale factor offset value between a first encoding*

18   *rate and a second encoding rate." ...*

19   *It should be apparent that while Gunji et al. mentions the term "scale factor",*

20   *there is no disclosure or suggestion that the "encoding scale factor data comprises a*

21   *scale factor offset associated with a scale factor offset value between a first encoding*

22   *rate and a second encoding rate."* (Remarks, pg. 13)

1

2   In response, the examiner respectfully notes that the applicant's arguments fail to

3 comply with 37 CFR 1.111(b) because they amount to a general allegation that the

4 claims define a patentable invention without specifically pointing out how the language

5 of the claims patentably distinguishes them from the references. Namely, applicant

6 appears to allege a difference between scale factor data and scale factor offset value

7 without providing supporting evidence or argument.

8   Furthermore, regarding the applicant's allegation that the prior art fails to

9 anticipate the claim recitations, the examiner notes that such claim recitations are

10 recited as optional (see claim 1). Additionally, even if such recitations were not recited

11 as optional, the examiner notes that recitations regarding the data employed within the

12 system of claims 1 and 9, fail to limit the claim by structure, and therefore do not

13 distinguish over the prior art.

14

15 (iii)   *Claim 9 includes the limitation "wherein the encoding scale factor data comprises*

16 *a scale factor offset associated with a scale factor offset value between a first encoding*

17 *rate and a second encoding rate." ...*

18 *Applicants submit that it should be apparent that Katayama et al. merely mentions scale*

19 *factor with regard to frequency bands in the frequency domain signal. However, there is*

20 *no disclosure of "a scale factor offset associated with a scale factor offset value*

21 *between a first encoding rate and a second encoding rate." (Remarks, pg. 13, 15)*

22

1   In response, the examiner respectfully notes that Katayama is not relied upon

2   within the rejection of claim 9.

3

4   *Conclusion*

5

6   The prior art made of record and not relied upon is considered pertinent to

7   applicant's disclosure:

8   ***See Notice of References Cited.***

9

10   A shortened statutory period for reply is set to expire **3** months (not less than 90

11   days) from the mailing date of this communication.

12   Any inquiry concerning this communication or earlier communications from the

13   examiner should be directed to Jeffery Williams whose telephone number is (571) 272-

14   7965. The examiner can normally be reached on 8:30-5:00.

15   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

16   supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

17   number for the organization where this application or proceeding is assigned is (703)

18   872-9306.

1   Information regarding the status of an application may be obtained from the

2   Patent Application Information Retrieval (PAIR) system. Status information for

3   published applications may be obtained from either Private PAIR or Public PAIR.

4   Status information for unpublished applications is available through Private PAIR only.

5   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

6   you have questions on access to the Private PAIR system, contact the Electronic

7   Business Center (EBC) at 866-217-9197 (toll-free).

8

9
10   /Jeffery Williams/
11   Examiner, Art Unit 2437
12
13
14   /Emmanuel L. Moise/
15   Supervisory Patent Examiner, Art Unit 2437